Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
1998 Biennial Regulatory Review Spectrum Aggregation Limits for Wireless Telecommunications Carriers	)	WT Docket 98-205
	)	
Cellular Telecommunications Industry Association's Petition for Forbearance From the 45 MHz CMRS Spectrum Cap	)	
	)	
Amendment of Parts 20 and 24 of the Commission's Rules—Broadband PCS Competitive Bidding and Commercial Mobile Radio Service Spectrum Cap	)	WT Docket No. 96-59
	)	
Implementation of Sections 3(n) and 332 of the Communications Act	)	GN Docket No. 93-252
	)	
Regulatory Treatment of Mobile Services	)	

REPORT AND ORDER

Adopted: September 15, 1999 Released: September 22, 1999

By the Commission: Commissioner Furchtgott-Roth concurring in part, dissenting in part and issuing a statement; Commissioner Powell issuing a separate statement.

I. INTRODUCTION

1. In this Report and Order, the Commission completes our re-assessment of the 45 MHz Commercial Mobile Radio Service (CMRS) spectrum cap and cellular cross-interest rules initiated as part of our 1998 biennial review of the Commission's regulations pursuant to section 11 of the Communications Act, as amended (Act).[1] After careful analysis and extensive review of the rules and the record in this proceeding, we conclude that at this time the spectrum cap and cellular cross-interest rules continue to be necessary to promote and protect competition in CMRS markets. However, we find that it is appropriate to modify both rules to allow some greater cross-ownership at this time. We also adopt a modest increase in the spectrum cap's current aggregation limit in rural areas to reflect the differing costs and benefits of limits on spectrum aggregation in rural areas.

2. The CMRS spectrum cap, set out in section 20.6 of the Commission's rules,[2] governs the amount of CMRS spectrum that can be licensed to a single entity within a particular geographic area. Pursuant to section 20.6, a single entity may acquire attributable interests in the licenses of broadband Personal Communications Service (PCS), cellular, and Specialized Mobile Radio (SMR) services that cumulatively do not exceed 45 MHz of spectrum within the same

[1] 47 U.S.C. § 161. This proceeding is part of our comprehensive review of existing Commission regulations to determine whether our rules continue to make economic and regulatory sense, pursuant to section 11. In the Telecommunications Act of 1996, Telecommunication Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996 Act), Congress sought to enhance competition in local and other telecommunications markets and recognized that the achievement of that goal would lessen the need for regulation of the industry. For that reason, Congress charged the Commission with reviewing regulations it applies to providers of telecommunications services on a biennial basis to "determine whether any such regulation is no longer necessary in the public interest as the result of meaningful economic competition between providers of such service." 47 U.S.C. § 161(a)(2); *see also* section 202(h) of the 1996 Act, 110 Stat. 56 (1996). If we find that a regulation is no longer in the public interest, we have an affirmative obligation to repeal or modify that regulation. 47 U.S.C. § 161(b).

[2] 47 C.F.R. § 20.6.

geographic area.[3] We recognize the substantial increase in competition in CMRS markets since the adoption of the spectrum cap in 1994. However, we do not find that we can rely solely on case-by-case review of transfers of control and assignments to ensure that competition in these markets continues to develop. We find that, as a general matter, the aggregation limit should be maintained at 45 MHz at this time. We believe, however, that the cap can be raised to 55 MHz in rural areas, which should facilitate the deployment of service, particularly PCS, to rural areas without presenting a significant risk to competition in those areas. We also find that the establishment of a separate, higher attribution benchmark for passive institutional investors will increase the availability of capital to all CMRS carriers.

3. The cellular cross-interest rule, set out in section 22.942 of our rules,[4] limits the ability of a party to have ownership interests in both cellular carriers in overlapping cellular geographic service areas (CGSAs). Although the two cellular carriers are no longer the only providers of mobile voice service in most areas, they still have the predominant share of subscribers in every one of these markets. Based on the cellular carriers' continuing disproportionate market presence, we find that at this time the cellular cross-interest rule is still necessary to protect and promote competition. We believe, however, that the attribution benchmarks used in the cellular cross-interest rule may be relaxed without significant risk to competition.

4. We will continue to reassess CMRS markets periodically and determine if it is appropriate to modify further or eliminate the spectrum cap and the cellular cross-interest rules. CMRS markets are rapidly changing. PCS and digital SMR are becoming available in more and more areas, both services are attracting more and more subscribers, and market share differences between these new competitors and cellular carriers are narrowing. We will continue to track these changes and report on the evolving level of competition in CMRS markets as part of our annual reports on the state of CMRS competition.[5] We will review the need for the spectrum cap and cellular cross-interest rules as part of our year 2000 biennial regulatory review, pursuant to section 11 of the Act.[6]

II. EXECUTIVE SUMMARY

5. In this Report and Order, we conclude that the spectrum cap and cellular cross-interest rules are currently necessary and efficient means to promote and protect competition in

[3] 47 C.F.R. § 20.6(a).

[4] 47 C.F.R. § 22.942.

[5] *See* 47 U.S.C. § 332(c)(1)(C)("The Commission shall review competitive market conditions with respect to commercial mobile services and shall include in its annual report an analysis of those conditions. Such analysis shall include an identification of the number of competitors in various commercial mobile services, an analysis of whether or not there is effective competition, an analysis of whether any such competitors have a dominant share of the market for such services, and a statement of whether additional providers or classes of providers in those services would be likely to enhance competition.").

[6] 47 U.S.C. § 161.

CMRS markets. After extensive review of the level of competition in these markets, we find that at this time the public interest is better served by the continued use of bright-line levels of acceptable ownership, rather than relying solely on case-by-case review of proposed ownership arrangements. We find, however, that the spectrum cap and cellular cross-interest rules should be modified in certain respects as described below.

6. We make the following changes to our rules:

- We adopt a 55 MHz spectrum aggregation limit for licensees serving rural areas, defined as Rural Service Areas (RSAs).

- For purposes of the spectrum cap, we establish a separate attribution benchmark of 40 percent for passive institutional investors.

- We amend the spectrum cap rule to attribute ownership interests held in a trust to the grantor, the beneficiary, and the trustee of the trust. We will continue to allow short-term trusts to be used as part of an approved divestiture plan to come into compliance with our rules.

- We amend the cellular cross-interest rule to allow a party with a controlling interest or an otherwise attributable interest in a cellular licensee to have a non-controlling or otherwise non-attributable direct or indirect ownership interest of up to 5 percent in another cellular licensee in overlapping CGSAs.

- We amend the cellular cross-interest rule to allow a party to have a non-controlling or an otherwise non-attributable direct or indirect ownership interest of up to 20 percent in both cellular licensees in overlapping CGSAs.

7. As part of this proceeding, the Commission also reviewed a petition to forbear from enforcement of the CMRS spectrum cap filed by the Cellular Telecommunications Industry Association (CTIA).[7] Based on the record and our analysis of CMRS markets, we find that the spectrum cap serves the public interest and is necessary to ensure that the charges, practices, classifications, or regulations by, for, or in connection with telecommunications carriers or telecommunications services are just and reasonable and are not unjustly or unreasonably discriminatory, and to protect consumers. Consequently, we deny the CTIA request that we forbear from enforcing the spectrum cap at this time.

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[7] Petition for Forbearance From the 45 MHz CMRS Spectrum Cap, Petition for Forbearance of the Cellular Telecommunications Industry Association, filed Sept. 30, 1998 (CTIA Forbearance Petition).

III. BACKGROUND

A. CMRS Spectrum Cap

8. The CMRS Spectrum Cap. Under the CMRS spectrum cap, "[n]o licensee in the broadband PCS, cellular, or SMR services (including all parties under common control) regulated as CMRS [ ] shall have an attributable interest in a total of more than 45 MHz of licensed broadband PCS, cellular and SMR spectrum regulated as CMRS with significant overlap in any geographic area."[8] A "significant overlap" of a PCS licensed service area and CGSA(s) and SMR service area(s) occurs when at least ten percent of the population of the PCS licensed service area is within the cellular geographic service area and/or SMR service area(s).[9] Therefore, a carrier's spectrum counts toward the spectrum cap if the carrier is licensed to serve 10 percent or more of the population of the designated service area. Under the CMRS spectrum cap, ownership interests of 20 percent or more (40 percent if held by a small business or rural telephone company), including general and limited partnership interests, voting and non-voting stock interests or any other equity interest, are considered attributable.[10] Officers and directors are attributed with their company's holdings, as are persons who manage certain operations of licensees, and licensees that enter into certain joint marketing arrangements with other licensees.[11] Stock interests held in trust are attributable only to those who have or share the power to vote or sell the stock.[12] Debt does not constitute an attributable interest for purposes of the spectrum cap, and securities affording potential future equity interests (such as warrants, options, or convertible debentures) are not considered attributable until they are converted or exercised.[13]

9. History of the Spectrum Cap. The CMRS spectrum cap was established in 1994 in the *CMRS Third Report and Order* as part of the implementation of the deregulated CMRS regime enacted by the Omnibus Budget Reconciliation Act of 1993 (1993 Budget Act).[14] Prior

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8 47 C.F.R. § 20.6(a). Under the current rule, no more than 10 MHz of SMR spectrum in the 800 MHz service will be attributed to an entity when determining compliance with the cap. 47 C.F.R. § 20.6(b).

9 47 C.F.R. § 20.6(c).

10 47 C.F.R. § 20.6(d)(2). In addition, ownership interests held by an entity with a non-controlling equity interest up to 40 percent in a broadband PCS licensee or applicant that is a small business are not attributable. 47 C.F.R. § 20.6(d)(2). Ownership interests held through successive subsidiaries are calculated by using a multiplier. 47 C.F.R. § 20.6(d)(8).

11 47 C.F.R. § 20.6(d)(7), (9), (10).

12 47 C.F.R. § 20.6(d)(3).

13 47 C.F.R. § 20.6(d)(5).

14 Implementation Of Sections 3(N) and 332 of the Communications Act, Regulatory Treatment Of Mobile Services, GN Docket No. 93-252, Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems In The 800 MHz Frequency Band PR Docket No. 93-144, Amendment of Parts 2 and 90 of the Commission's Rules to Provide for the Use Of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz And 935-940 MHz Band Allotted to the Specialized Mobile Radio Pool PR Docket No. 89-553, *Third Report and Order*, 9 FCC Rcd. 7988, 7992 (1994) *(CMRS Third Report and Order)* (citing Omnibus Budget

to the adoption of the CMRS spectrum cap, the Commission had imposed service-specific limitations on aggregation of broadband PCS spectrum and on cellular/PCS cross-ownership.[15] In adopting a general, multiple service cap in addition to the PCS/cellular ownership rules, the Commission explained that an overall spectrum cap for CMRS would add certainty to the marketplace without sacrificing the benefits of pro-competitive and efficiency-enhancing aggregation.[16] The Commission found that if licensees were to aggregate sufficient amounts of CMRS spectrum, it would be possible for them, unilaterally or in combination, to exclude efficient competitors, to reduce the quantity or quality of services provided, or to increase prices to the detriment of consumers. The Commission concluded that the imposition of a cap on the amount of spectrum that a single entity can control in any one geographic area would limit its ability to increase prices artificially.[17] The Commission also found that a cap on broadband PCS, SMR, and cellular licensees, would "prevent licensees from artificially withholding capacity from the market."[18] The Commission found that a 45 MHz cap provided a "minimally intrusive means" for ensuring that the mobile communications marketplace remained competitive and preserved incentives for efficiency and innovation.[19] The Commission adopted a 20 percent cross-ownership attribution rule for the CMRS spectrum cap in order to be consistent with the attribution rules in the PCS/cellular cross-ownership rule.[20] The Commission also adopted a ten percent population overlap threshold, consistent with the standards used in the PCS/cellular cross-ownership rule.[21]

10. In the *CMRS Fourth Report and Order*, the Commission further clarified that certain business relationships could give rise to attributable ownership interests for purposes of the CMRS spectrum cap. The Commission found that management agreements that authorize managers of cellular, broadband PCS or SMR systems to engage in practices or activities that determine or significantly influence the nature and types of services offered, the terms on which services are offered, or the prices charged for such services, give the managers an attributable

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Reconciliation Act of 1993, Pub. L. No. 103-66, Title VI § 6002(b), 107 Stat. 312 (1993)).

15 Amendment of the Commission's Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, *Second Report and Order*, 8 FCC Rcd 7700, 7728 ¶ 61, 7745 ¶ 106 (1993) (*Broadband PCS Second Report and Order*) (limited broadband PCS licensees to 40 MHz of the total spectrum allocated to broadband PCS; limited cellular licensees to no more than 10 MHz of PCS spectrum in their cellular service areas); Amendment of the Commission's Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, *Memorandum Opinion and Order*, 9 FCC Rcd 4957, 4984 ¶ 67 (1994) (*Broadband PCS Reconsideration Order*) (revised the PCS/cellular cross-interest rule to allow cellular licensees to increase their holding of PCS spectrum from 10 MHz to 15 MHz after January 1, 2000).

16 *CMRS Third Report and Order*, 9 FCC Rcd at 8100-8107.

17 *Id.* at 8104 ¶ 248.

18 *Id.* at 8108 ¶ 258.

19 *Id.* at 7999 ¶ 16.

20 *Id.* at 8114 ¶ 276.

21 *Id.* at 8116-17 ¶ 281.

interest in that licensee.[22] The Commission also concluded that joint marketing agreements that affect pricing or service offerings are attributable.[23]

11. In 1996, the Commission reaffirmed the basic tenets of the CMRS spectrum cap and provided additional economic rationale for its use in the *CMRS Spectrum Cap Report and Order*.[24] Specifically, the Commission analyzed potential market concentration using the Herfindahl-Hirschman Index (HHI) and found that a 45 MHz spectrum cap was necessary to prevent CMRS markets from becoming highly concentrated.[25] The Commission found that such a spectrum cap would help ensure competition and would address concerns about potential anticompetitive behavior in CMRS markets.[26] Based on that analysis the Commission found that the 45 MHz CMRS spectrum cap provided sufficient means to promote and protect competition and that it therefore could eliminate the PCS/cellular cross-ownership rule and the 40 MHz PCS spectrum cap.[27]

12. The Commission also reconsidered the ownership and geographic attribution provisions of the CMRS spectrum cap in the *CMRS Spectrum Cap Report and Order*. Although the Commission decided not to alter the 20 percent ownership attribution standard, it did adopt a four-pronged test under which it would review requests for waiver of the standard.[28] The Commission also eliminated the 40 percent attribution threshold for ownership interests held by minorities and women, but maintained it for small businesses and rural telephone companies.[29] In considering changes to the geographic attribution standard, the Commission declined to alter the 10 percent overlap definition because it found "that an overlap of 10 percent of the population is sufficiently small that the potential for exercise of undue market power by the cellular operator is slight."[30] In addition, the Commission expanded the divestiture provisions by allowing parties with non-controlling, attributable interests in CMRS licensees to have an

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22 Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, GN Docket No. 93-252, *Fourth Report and Order*, 9 FCC Rcd 7123, 7128 ¶ 25 (1994) (*CMRS Fourth Report and Order*).

23 *Id.* at 7129-30 ¶ 30.

24 Amendment of Parts 20 and 24 of the Commission's Rules -- Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap; Amendment of the Commission's Cellular/PCS Cross-Ownership Rule, WT Docket 96-59, GN Docket 90-314, *Report and Order*, 11 FCC Rcd. 7824, 7864-87 (1996) (*CMRS Spectrum Cap Report and Order*), *recon.* 12 FCC Rcd 14031 (1997) (*BellSouth MO&O*), *aff'd sub nom. BellSouth Corp. v. FCC*, 162 F.3d 1215 (D.C. Cir. 1999).

25 *CMRS Spectrum Cap Report and Order*, 11 FCC Rcd at 7869-73 ¶¶ 96-100.

26 *Id.* at 7875 ¶ 104.

27 *Id.* at 7875 ¶ 105.

28 *Id.* at 7887 ¶ 131.

29 *Id.* at 7828 ¶ 4, 7880 ¶ 117.

30 *Id.* at 7876 ¶ 107.

attributable or controlling interest in another CMRS application that would exceed the 45 MHz spectrum cap so long as they followed our post-licensing divestiture procedures.[31]

13. The Commission has also clarified that the CMRS spectrum cap is not limited to real-time, two-way switched telephone service, but covers a variety of services within the definition of CMRS. In the *BellSouth MO&O* in 1997, the Commission explained that because SMR technology potentially enables SMR licensees to offer services that are nearly identical to those offered by broadband PCS and cellular licensees, all SMR services are subject to the CMRS spectrum cap to guard against spectrum aggregation that could confer undue market power.[32] The D.C. Circuit affirmed this position, and declined to impose a distinction between voice and non-voice SMR in the context of spectrum acquisition. The court instead found the inclusion of all SMR spectrum in the cap, including those frequencies used to provide data services, to be reasonable.[33] The court approved the Commission's view that the cap served to guard against the excessive accumulation of CMRS spectrum, regardless of the use to which spectrum currently was dedicated. Further, the court found that "[a] spectrum cap, unlike many other regulations, might actually require a bright-line rule to be effective" and upheld the Commission's denial of BellSouth's waiver request.[34]

B. Cellular Cross-Interest Rule

14. The Rule. Section 22.942 of the Commission's rules prohibits any person from having a direct or indirect ownership interest in licensees for both cellular channel blocks in overlapping CGSAs.[35] A party with a controlling interest in a licensee for one cellular channel block may not have any direct or indirect ownership interest in the licensee for the other channel block in the same geographic area.[36] A party may, however, have a direct or indirect ownership interest of five percent or less in the licensees for both channel blocks so long as neither of those interests is controlling.[37] Divestiture of interests as a result of an assignment of authorization or transfer of control must occur prior to the consummation of the transfer or assignment.[38]

15. History of the Cellular Cross-Interest Rule. The cellular cross-interest rule was adopted in 1991.[39] At that time cellular licensees were the predominant providers of mobile

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[31] *Id.* at 7886 ¶ 130.

[32] *BellSouth MO&O*, 12 FCC Rcd at 14037 ¶ 10, 14040 ¶ 14.

[33] *BellSouth v. FCC*, 162 F.3d at 1222-24.

[34] *Id.* at 1225.

[35] 47 C.F.R. § 22.942.

[36] 47 C.F.R. § 22.942.

[37] 47 C.F.R. § 22.942(a).

[38] 47 C.F.R. § 22.942(b).

[39] Amendment of Part 22 of the Commission's Rules to Provide for the Filing and Processing of Applications for

voice services. In adopting the cross-interest rule the Commission stated that "in a service where only two cellular carriers are licensed per market, the licensee on one frequency block in a market should not own an interest in the other frequency block in the same market."[40] Consequently, "[i]n order to guarantee the competitive nature of the cellular industry and to foster the development of competing systems" the Commission adopted restrictions on a party's ability to hold ownership interests in both cellular licensees in the same geographic area.[41]

C. Notice of Proposed Rulemaking

16. In the Notice of Proposed Rulemaking (*NPRM*) in this proceeding,[42] we initiated this re-evaluation of the CMRS spectrum cap as part of our 1998 biennial regulatory review. The *NPRM* also sought comment on whether to retain, modify, or repeal the cellular cross-interest rule. In addition, the *NPRM* incorporated a petition filed by CTIA on September 30, 1998, requesting that the Commission forbear from enforcing the CMRS spectrum cap pursuant to section 10 of the Communications Act.[43]

17. The *NPRM* requested comment on whether the Commission should retain, modify or repeal the spectrum cap. The *NPRM* discussed the changes occurring in CMRS markets, and sought comment on whether the CMRS spectrum cap in its current form continues to make economic and regulatory sense given those changes. Specific options set forth in the *NPRM* included: (1) modification of the significant overlap threshold;[44] (2) modification of the 45 MHz limitation;[45] (3) modification of the ownership attribution thresholds;[46] (4) forbearance from enforcing the spectrum cap;[47] (5) sunsetting the spectrum cap;[48] and (6) elimination of the spectrum cap.[49]

Unserved Areas in the Cellular Service and to Modify Other Cellular Rules, CC Docket Nos. 90-6, 85-388, *First Report and Order and Memorandum Opinion and Order On Reconsideration,* 6 FCC Rcd 6185, 6628-29 (1991) (*Cellular First Report and Order*). The rule initially was codified at 47 C.F.R. § 22.902(b)(5), but subsequently was moved, without revision, to 47 C.F.R. § 22.942. Revision of Part 22 of the Commission's Rules Governing the Public Mobile Services, CC Docket 92-115, *Report and Order*, 9 FCC Rcd 6513, 6574 (1994).

[40] *Cellular First Report and Order,* 6 FCC Rcd at 6628 ¶ 103.

[41] *Id.* at ¶ 104.

[42] 1998 Biennial Regulatory Review – Spectrum Aggregation Limits for Wireless Telecommunications cariers, WT Docket No. 98-205, *Notice of Proposed* Rulemaking, 13 FCC Rcd 25132 (1998) (*NPRM*).

[43] *Id.* at 25134-35 ¶ 5, 25147 ¶ 29.

[44] *Id* at 25156-57 ¶¶ 50-53.

[45] *Id.* at 25157-59 ¶¶ 54-58.

[46] *Id.* at 25159-61 ¶¶ 59-62.

[47] *Id.* at 25161-63 ¶¶ 63-70.

[48] *Id.* at 25163-64 ¶¶ 71-73.

[49] *Id.* at 25164-66 ¶¶ 74-78.

18. In the *NPRM* we stated our intent to consolidate in this proceeding certain spectrum-cap-related issues pending in other proceedings, and accordingly incorporated the records of those proceedings into this one. We therefore also consider here certain issues raised by: (1) a petition for reconsideration of the *CMRS Third Report and Order* filed by SMR Won;[50] (2) a petition for reconsideration of the *CMRS Fourth Report and Order* filed by McCaw Cellular;[51] (3) petitions for reconsideration of the *CMRS Spectrum Cap Report and Order* filed by Omnipoint and Radiofone;[52] (4) the pending *Third FNPRM* in GN Docket No. 93-252;[53] and (5) a CTIA petition seeking forbearance from applying section 20.6 of the Commission's rules.[54] We also noted that there were three pending requests for waiver of the spectrum cap filed by Western PCS I License Corporation, Western PCS II License Corporation, and Triton Communications.[55]

19. Twenty-five parties filed comments on the *NPRM*, and fifteen parties filed reply comments. Those parties, and the abbreviated names used in this Order, are set forth in Appendix A.[56]

IV. DISCUSSION

A. Assessment of the Need for the Spectrum Cap and Cellular Cross-Interest Rules

20. We conclude that bright-line spectrum cap and cellular cross-interest rules remain necessary to serve the public interest at this time. When the Commission first decided to introduce additional competition in CMRS markets in 1994, it formulated the spectrum cap rule in part to ensure that licenses would be distributed among a diverse group of entities. The Commission also indicated that it sought to "maximize the number of opportunities for new

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50 *Id.* at 25142-43 ¶ 20. SMR Won's petition also raised other issues regarding the *CMRS Third Report and Order*. Those issues will be addressed in a separate proceeding.

51 *NPRM* at 25143 ¶ 21.

52 *Id.* at 25143-44 ¶¶ 22-24. Radiofone's petition also raised other issues relating to the *CMRS Spectrum Cap Report and Order*. Those issues will be addressed in a separate proceeding.

53 *Id.* at 25146-47 ¶ 28. Implementation of Sections 3(n) and 332 of the Communications Act -- Regulatory Treatment of Mobile Services, GN Docket No. 93-252, *Third Further Notice of Proposed Rulemaking*, 10 FCC Rcd 6880 (1995) (*Third FNPRM*).

54 *NPRM* at 25147, 25161-63 ¶ 29, 63-70 (citing CTIA Forbearance Petition).

55 *NPRM* at 25144-46 ¶¶ 25-27. After release of the NPRM, five parties filed requests for waiver of the spectrum cap in conjunction with winning bids in Auction No. 22. *See* Pioneer Telephone Association, Inc. *et al;* Requests for Waiver of Section 20.6 of the Commission's Rules, *Order*, DA 99-1823 (CWD rel. Sep. 8, 1999).

56 Donald R. Newcomb and Southeast Telephone filed informal comments. In addition, Cellular Communications of Puerto Rico, Inc. (CCPR) filed an *ex parte* letter. Letter from Sara F. Seidman, counsel for CCPR, to Thomas J. Sugrue, FCC, dated Apr. 22, 1999.

viable competitors to emerge."[57] In the *CMRS Third Report and Order*, the Commission stated that it devised a spectrum cap rule out of concern "that excessive aggregation by any one or several CMRS licensees could reduce competition by precluding entry [of] other service providers and might thus confer excessive market power on incumbents."[58] In declining to eliminate the spectrum cap and cellular cross-interest rules, we agree with commenters in this proceeding who express concern that such aggregation could result in consolidation among current or future CMRS competitors and, particularly, that the number of facilities-based providers operating in individual markets could decline.[59] We also determine that both our spectrum cap and cellular cross-interest rules are appropriate and effective tools to be used in conjunction with our section 310(d) case-by-case reviews as we evaluate proposed mergers and acquisitions.

1. Public Policy Objectives

21. At its inception, the CMRS spectrum cap was designed to "discourage anticompetitive behavior while at the same time maintaining incentives for innovation and efficiency."[60] The Commission also determined that the rule "furthers the public interest by promoting competition in CMRS services, allowing review of CMRS acquisitions in an administratively simple manner, and lending certainty to the marketplace."[61] In its reaffirmation of the rule in the *CMRS Spectrum Cap Report and Order*, the Commission also found that the cap "furthers the goal of diversity of ownership that we are mandated to promote under section 309(j)" of the Act.[62] In adopting the cellular cross-interest rule, the Commission found that the rule was needed "[i]n order to guarantee the competitive nature of the cellular industry and to foster the development of competing systems."[63]

22. As stated in the *NPRM*, our re-evaluation of the need for CMRS spectrum aggregation limits and cellular cross-interest limits is guided by four central principles.[64] First, the

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[57] Amendment of the Commission's Rules to Establish New Personal Communications Services, RM-7140, RM-7175, RM-7618 FCC 94-144, GN Docket No. 90-314, *Memorandum Opinion and Order*, 9 FCC Rcd 4957, 4979 ¶ 53 (1994) *(PCS Memorandum Opinion and Order)*.

[58] *CMRS Third Report and Order*, 9 FCC Rcd at 8101 ¶ 240.

[59] As PCIA notes, we have recognized that "while aggregation of spectrum allows efficiencies and economies, there is a point at which aggregation results in less innovation and higher prices." PCIA comments at 5 (citing *CMRS Spectrum Cap Report and Order*, 11 FCC Rcd at 7869 ¶ 95). *See also* Northcoast comments at 4; TRA comments at 4-5.

[60] *CMRS Third Report and Order*, 9 FCC Rcd at 8105 ¶ 251.

[61] *Id.*

[62] *CMRS Spectrum Cap Report and Order*, 11 FCC Rcd. at 7873 ¶ 102 (citing 47 U.S.C. § 309(j)).

[63] *Id.* at ¶ 104.

[64] *NPRM*, 13 FCC Rcd at 25135 ¶ 5.

operation of market forces generally better serves the public interest than regulation. As a general matter of principle, we prefer to place ultimate reliance on the market, rather than on regulation, to direct the course of development in the CMRS and other markets. Second, we intend to foster vigorous competition in all telecommunications markets, consistent with the central Congressional mandate of the 1996 Act. In particular, we wish to ensure that there are no regulatory impediments to the evolution of wireless carriers into more effective competitors vis-à-vis the local wireline telephone companies. Third, we seek to secure the benefits of modern telecommunication services, including wireless services, for all areas of our Nation, including high-cost and rural areas. Finally, our regulations must promote, rather than impede, the introduction of innovative services and technological advances.

2. Current State of CMRS Competition and the Spectrum Cap

23. As we described in the *Fourth Annual CMRS Competition Report*, there is considerable evidence that competition is steadily growing in many CMRS markets.[65] Newer broadband PCS licensees continue to inaugurate services while operational carriers expand their footprints. Most cellular carriers are upgrading their networks by converting to digital technology and thereby expanding their network capacity. Growth is also accelerating in the provision of data services as part of CMRS. As a consequence, prices are falling, usage is expanding, and service options are growing. In some cities, as many as seven independent facilities-based providers are now competing for business in mobile voice markets.[66]

24. Commenters generally agree that considerable progress has been made in recent years toward more competitive CMRS markets.[67] There is also general agreement that further progress toward competitive CMRS markets can be anticipated.[68] Nevertheless, commenters remain sharply divided in their assessments of the current state of competition in these markets. Commenters express disagreement with respect to appropriate product market definition, barriers to entry, and the dynamic effects of technological change in these markets. Those favoring retention of a spectrum cap typically distinguish among the various wireless product markets and highlight barriers to entry over the near term, most notably, the need to secure spectrum rights before they can enter these markets.[69] Commenters favoring elimination of the cap tend to define markets broadly, raise *de novo* entry prospects associated with future spectrum auctions,[70] and

65 Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, *Fourth Report*, FCC 99-136 (rel. June 24, 1999) at 20-23, 25 (*Fourth Annual CMRS Competition Report*).

66 *See* D&E comments at 5, 9; Digiph comments at 2.

67 *See, e.g.*, Digiph comments at 2,4; North Coast comments at 3; Omnipoint comments at 3-4; Radiofone comments at 5; RTG comments at 5; SBCW comments at 4; Crandall & Gertner at 5-6.

68 Digiph comments at 3; TDS comments at 3.

69 *See, e.g.*, D&E Communications comments at 8.

70 Crandall & Gertner at 4 ¶ 15, 16 ¶ 49.

predict dramatic changes from the adoption of third generation (3G) wireless network technologies, such at IMT-2000.[71]

25. Although we agree that competition is increasing in CMRS markets, we find that there remain significant reasons to be concerned about the effects of undue concentration of CMRS spectrum. Even in major metropolitan markets, where numerous competitors are offering mobile voice services, in almost all markets the two cellular carriers still have in excess of 70 percent of the customers.[72] In addition, the amount of CMRS spectrum is fixed, and the discipline of market forces is tempered by the reality that would-be market entrants must obtain spectrum rights, which in practical terms requires that they find willing sellers.

26. We also observe that, by and large, the current 45 MHz spectrum aggregation limit does not appear to be constraining carriers. Generally, PCS carriers have not yet deployed capacity up to the limits of their licensed capacity. In addition, very few cellular carriers have acquired spectrum up to the permissible limit.[73] We also have received only a handful of waiver requests to exceed the cap.[74] Consequently, at least for now, we determine that our spectrum cap rule has not significantly constrained carriers in their ability to provide service at low cost, deploy new services, or commit to innovation. Recognizing the speed with which the industry is changing and the biennial review mandate of the 1996 Act, however, we will revisit these issues as part of our year 2000 biennial review.[75]

3. Assessment of the State of CMRS Competition and the Effects of Possible Spectrum Consolidation

27. In general, we find, based on the evidence we discuss below, that the provision of CMRS remains concentrated among relatively few providers, even in urban markets. We

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71 *See, e.g.*, BellSouth comments at 10; GTE comments at 19-22; SBCW comments at 9-10.

72 *See* letter from Brent H. Weingardt, PCIA, to Magalie Roman Salas, FCC, dated Aug 25, 1999, Attachment (Telecompetion, Market Data Report, Aug. 23, 1999)(in all but 15 of the top 203 MSAs the two celular carriers have 70 percent of more of subscribers); PCIA reply comments, Attachment A (Telecompetiton). *See also Fourth Annual CMRS Competition Report* at 9 (at end of 1998, cellular carriers had approximately 86 percent of mobile telephone subscribers nationwide).

73 *See* Sprint PCS comments at 14.

74 *See NPRM,* 13 FCC Rcd at 25144-46 ¶¶ 25-27. Subsequent to release of the *NPRM,* five parties have filed requests for waiver of the spectrum cap in conjunction with winning bids in Auction 22. *See* Pioneer Telephone Association, Inc. *et al;* Requests for Waiver of Section 20.6 of the Commission's Rules, *Order*, DA 99-1823 (CWD rel. Sep. 8, 1999).

75 We decline to adopt a sunset for either the spectrum cap or the cellular cross-interest rule at this time. *See NPRM* at 25162-63 ¶ 67. As we discuss in this Order, competition in CMRS markets is changing rapidly. We do not believe that at this time we can accurately predict when it would be proper to eliminate either of these two rules. We believe it is more appropriate at this time to reassess the state of CMRS markets, and the continuing need for these rules, as part of our year 2000 biennial review.

recognize that this situation is changing as new entrants into these markets begin offering services and competing for customers. Nevertheless, many firms that have been awarded licenses recently have not yet begun, or still are in the early stages of, their network build-out. As a consequence of the concentration currently prevailing in the CMRS sector, and the risks we associate with concentrated markets, we seek to foster more vigorous competition in markets in which adequate competition has not yet been realized, and to inhibit the erosion of competition from undue consolidation of spectrum in markets in which competitive conditions may have advanced significantly.

a. Analytical Framework

28. In determining whether to eliminate, sunset, or modify the spectrum cap and cellular cross-interest rules we take into consideration several factors. One factor that must be considered is the ease or difficulty with which competitors can enter CMRS markets. The *Merger Guidelines,*[76] which provide a framework for evaluating prospects for entry into a particular market, deem a merger unlikely to create or enhance market power or facilitate its exercise, if entry into the relevant market "is so easy that market participants . . . could not profitably maintain a price increase above pre-merger levels. Such entry likely will deter an anticompetitive merger in its incipiency, or deter or counteract the competitive effects of concern."[77] In this respect, we are mindful that CMRS markets differ from certain other telecommunications markets with respect to ease of entry because of the need to obtain a governmentally-granted spectrum license to provide CMRS. This and other barriers that limit the ability of firms to respond with adequate certainty, timeliness and sufficiency to undermine anticompetitive behavior over the near term.

29. Our assessment must also take into account the effect of the relevant rules on the long-term prospects for competition in CMRS markets. From its initial consideration of a spectrum cap, the Commission has focused on the long-term objective of fostering competition. Moreover, because the Commission's emphasis in considering the prospects for CMRS competition was on the allocation of a scarce resource, spectrum, rather than on market share, we used economic analysis to examine alternative scenarios for the distribution of CMRS spectrum among licensees. By using allocated spectrum, rather than current productive capacity, as measures for market share, we examined conditions of potential competition in these markets rather than actual competition. In conducting this analysis, the Commission found acceptable the prospect of some post-auction spectrum aggregation in any one market, so long as no single entity held an attributable interest in more than 45 MHz of CMRS spectrum.[78] Particularly given

[76] [1992] Department of Justice – Federal Trade Commission Horizontal Merger Guidelines, 4 Trade Reg. Rep. (CCH) (*Merger Guidelines*).

[77] *Merger Guidelines* at § 3.0.

[78] *CMRS Spectrum Cap Report and Order*, 11 FCC Rcd at 7869 ¶ 95. We noted that "[u]p to a point, horizontal concentration can allow efficiencies and economies that would not be achievable otherwise, and can therefore be pro-competitive, pro-consumer, and in the public interest." *Id.* For purposes of identifying this point, we even

auctions and the post-auction market."[88] In the *Broadband PCS Reconsideration Order*, we emphasized that our goal in crafting limitations on spectrum aggregation was not solely "to prevent anticompetitive behavior which may or may not materialize but rather to promote competition. . . . We conclude that the public interest would be best served by maximizing the number of viable new entrants in a given market."[89] Given the ongoing impediments to entry into broadband CMRS markets, we believe that our spectrum cap and cellular cross-interest rules continue to serve our competition goals.

34. Moreover, despite enormous progress in the past few years, the broadband PCS sector remains in the early stages of deployment. While many carriers are offering service now, facilities-based coverage often is provided only to a portion of a new carrier's potential market. Additionally, many licensees have yet to begin offering service at all, and some have yet to begin constructing their networks. In this regard, we find while our public interest standard and the Sherman and Clayton Acts can deal with potential rather than actual competition, the spectrum cap is a particularly effective way of addressing concerns related to the loss of potential competition.

35. Our concern that competition in CMRS markets is not fully developed is supported by the fact that, as conventional analyses of market concentration show, even the largest urban markets for mobile telephone services remain quite concentrated. We find persuasive the submissions by several commenters with data on market concentration in urban markets for mobile voice services. For example, HAI, on behalf of PCIA, calculated HHIs -- using estimated shares of subscribers -- for eight markets within the nation's 200 largest MSAs/CMSAs, two from each quartile.[90] In all eight markets, HHIs were found to exceed 3000, well above the Department of Justice threshold for highly concentrated markets. Moreover, PCIA's data also show both cellular carriers have a combined market share exceeding 70 percent in almost every market.[91]

36. On behalf of Sprint PCS, John Hayes of Charles River Associates (CRA) calculated HHIs for the nation's 25 largest markets using customer subscription data compiled in January 1998, July 1998, and January/February 1999.[92] His analysis shows that HHIs in the

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[88] *CMRS Spectrum Cap Report and Order* at ¶ 102.

[89] *Broadband PCS Reconsideration Order*, 9 FCC Rcd at 4998-4999.

[90] PCIA reply comments at 9-10.

[91] PCIA reply comments at 10. While we are inclined to assume that the shares reported by PCIA and Telecompetition for individual markets may be subject to measurement error, when aggregated, these data covering the 200 largest urban markets comport well with data for the entire nation. *See Fourth Annual CMRS Competition Report* at 9. The PCIA data yield an 81.5 percent share for cellular carriers in these 200 markets, compared with 86 percent nationwide. Given the urban deployment strategy being adopted by most PCS carriers, we would expect to observe a lower cellular share in the PCIA sample.

[92] Hayes at 8, Table 1; letter from Jonathan Chambers, Sprint PCS, to Magalie Roman Salas, FCC, dated Aug. 13, 1999, Attachment (John B. Hays, HHIs in Top 25 MSAs & PMSAs).

service) by one or more firms attempting to exercise market power.[82] Commenters generally recognize that there are numerous entry barriers relating to the provision of CMRS, including acquisition of spectrum rights, financing, and access to tower sites,[83] although there is debate over the magnitude of these barriers.[84] In any event, we believe that barriers to entry are significant, and that the current state of competition requires continued vigilance over at least the near term.

32. *Prospects for Long-Term Competition.* Turning to the second factor, long-term prospects for competition, there is little dispute in the record that considerable progress has been made toward the goal of promoting competition in CMRS markets, but many commenters question whether an adequate array of competitive options is now available to all of the nation's wireless consumers.[85] While commenters generally agree that the creation of the spectrum cap rule helped competition in mobile voice markets develop out of a duopoly environment, disagreement exists regarding the extent to which competition has been achieved.[86] Several commenters contend that with the initial licensing of PCS spectrum now largely completed, our objectives have essentially been accomplished.[87] Some commenters argue that with the completion of the recent supplemental auction of C-block licenses, even further progress toward our goals has been achieved. We cannot agree, however, that merely making spectrum available completes the task of promoting competition.

33. The Commission has had prior occasion to point out the continuing need to promote competition and the entrance of new participants in the CMRS markets even after broadband licenses were awarded. In the *CMRS Spectrum Cap Report and Order*, for example, we stated that "the 45-MHz [spectrum] cap will continue to serve [our] objectives in future

[82] *Id.* at § 3.0.

[83] GTE comments at 16; D&E comments at 7 n.21; PCIA comments at 7; PCIA reply comments at 15 n. 39.

[84] PCIA argues that "there is no doubt that barriers to entry in this market are high," since it may take years for equipment to be designed, tested and commercially available that would enable a new entrant to provide services not already being offered in the spectrum band in which it is licensed. PCIA reply comments at 15 n. 39. Sidak and Teece contend that the incremental cost of cell sites and tower siting are both on the decline, but do not address the absolute level of those costs or the costs of spectrum rights. GTE comments at 16; GTE reply comments at 12-13. Moreover, at least one wireless analyst believes that these costs will rise for new entrants, as growing demand for wireless connectivity generally and for wireless data in particular increases demand for tower and cell sites. *See* John Bensche, "Seizing the Narrows," Lehman Brothers (July 30, 1999).

[85] TDS comments at 3-4. *See also* BellSouth comments at 11; Western Wireless comments at 4.

[86] North Coast comments at 4; Wireless One comments at 3; SBA reply comments at 4. However, AirTouch contends that the Commission should avoid overstating the extent to which the rule has contributed to the successful growth of the CMRS sector. Instead, it attributes industry growth to the allocation and auctioning of more spectrum, rapid technological advances, and narrowly focused regulation such as build-out benchmarks. AirTouch comments at 10. *See also* Western Wireless comments at i.

[87] Bell Atlantic Mobile comments at 15-16; Omnipoint comments at 4.

Given the limited deployment of PCS in less densely populated areas, one of these two firms, and in many cases both, likely command market shares in excess of 35 percent. CTIA itself acknowledges that concerns over market power begin to arise when firms hold 35 percent or more of the market.[100]

39. Crandall and Gertner caution against using HHIs because the CMRS sector is such a dynamic industry.[101] Even PCIA's expert notes that, "where competitors have entered markets recently and are expanding their share, such as in many wireless telephony markets, market share data will tend to understate the future competitive significance of recent entrants."[102] In its recent review of competitive conditions in the CMRS sector, the Commission reported that in the last two quarters of 1998, one analyst found that new entrants account for more than 45 percent of the sector's subscriber growth.[103] This analyst expects that during 1999 combined PCS and digital SMR providers will account for 54 percent of total net additions of wireless subscribers, versus 46 percent for the cellular incumbents.[104] These data provide important evidence that static measures of market share—which currently would ascribe over 85 percent of the market to cellular firms[105]—do not fully describe competitive conditions in these markets. As a result of these findings, we recognize that conditions are changing rapidly. Accordingly, as indicated above, we propose to re-examine the arguments for retaining the spectrum cap and the cellular cross-interest rule as part of our year 2000 biennial review. In the meantime, however, we believe that current levels of market concentration reinforce our view that increases in concentration could threaten competition and harm the public interest.

40. Similarly, we are not persuaded by the arguments of commenters who urge elimination of the cap based on information other than market shares or concentration as evidence of the competitive nature of CMRS markets. They point to pricing trends, customer churn (switching of vendors), and the incentives associated with carriers having excess capacity.[106] Many commenters point generally to falling prices as evidence of robust competition in the market for mobile telephone services.[107] Several other commenters argue that customers

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[100] CTIA comments at 5-6.

[101] Bell Atlantic comments at 17.

[102] Hayes at 5, as cited in Bell Atlantic reply comments at 6 ¶ 11.

[103] *Fourth Annual CMRS Competition Report* at 23.

[104] Donaldson Lufkin & Jenrette, The Global Wireless Communications Industry (Summer 1999) at 22, Table 6; *see also* 15, Table 2C.

[105] *See Fourth Annual CMRS Competition Report* at 9 (according to one estimate, at the end of 1998, cellular operators had approximately 86 percent of the mobile telephone subscribers); letter from Brent H. Weingardt, PCIA, to Magalie Roman Salas, dated Aug. 25, 1998, at 1 (Telecompetition report shows cellular has 88 percent market share in top 203 MSAs).

[106] *See, e.g.*, AirTouch comments at 7; AT&T Wireless comments at 9; GTE comments at 13-16; Western Wireless comments at 5-6.

[107] America One comments at 4; TRA comments at 5; Western Wireless comments at i, 5; Western Wireless reply

largest metropolitan markets range between 2569 and 4511.[93] CRA also furnishes detailed data on market shares for the Chicago PMSA.[94] We summarize recent analyses of market concentration in the Chicago area in Table 1.

Table 1. Estimated HHIs for Mobile Voice Services in Metropolitan Chicago

Source (date)	HHI	Citation
Sprint PCS (January 1998)	4119	Comments, Hayes Attachment at 8
Sprint PCS (July 1998)	3862	Comments, Hayes Attachment at 8
Sprint PCS (January 1999)	3360	Aug. 13, 1999 submission[95]
PCIA ("early" 1999)	3331	May 6, 1999 submission[96]
Department of Justice (1999)	3200-4100	CIS, *USA vs. SBC and Ameritech*[97]

37. Finally, the Department of Justice recently examined several markets for wireless mobile telephone services in connection with three proposed telecom acquisitions: AT&T's acquisition of TCI, Inc., SBC's merger with Ameritech, and the acquisition by GTE of certain Ameritech properties. In their review of the SBC/Ameritech merger, DOJ found that market concentration in the fourteen markets in which SBC and Ameritech both control cellular licenses was "in the range of 3200 to 4100, well above the 1800 threshold at which the Department normally considers a market to be concentrated."[98]

38. The data in the record indicate that in most of the nation's 200 largest markets the two cellular companies together have in excess of 70 percent of mobile phone subscribers.[99]

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93 Letter from John Chambers, Sprint PCS, to Magalie Roman Salas, FCC, dated Aug. 13, 1999, Attachment.

94 Hayes at Table 2. According to Donaldson Lufkin & Jenrette, entities controlling CMRS licenses in the Chicago market include SBC, Ameritech (sale pending to GTE), AT&T Wireless, PCS PrimeCo (accruing to Vodafone AirTouch), Sprint PCS (with two licenses), and Nextel. Other licensees are Cook Inlet and NextWave. Donaldson Lufkin & Jenrette, The Global Wireless Communications Industry (Summer 1999).

95 Letter from John Chambers, Sprint PCS, to Magalie Roman Salas, FCC, dated Aug. 13, 1999, Attachment.

96 Letter from Brent H. Weingardt, PCIA, to Magalie Roman Salas, FCC, dated May 6, 1999, Attachment (An Analysis of Market Concentration in the Cellular, PCS and ESMR Markets, dated May 5, 1999) at 2.

97 Competitive Impact Statement, *United States v. Southwestern Bell Co. and Ameritech Corporation*, Civil No. 99-0715 (TPJ) at 9 (filed April 16, 1999).

98 *Id.* DOJ reviewed the following markets: Chicago, IL MSA; St. Louis, MO-IL MSA; Gary-Hammond-East Chicago, IN MSA; Springfield, IL MSA; Champaign-Urban-Rantoul, IL MSA; Bloomington-Normal, IL MSA; Decatur, IL MSA; Illinois RSA 2 – Bureau; Illinois RSA 5 – Mason; Illinois RSA 6 – Montgomery; Missouri RSA 8 – Callaway; Missouri RSA 12 – Maries; Missouri RSA 18 – Perry; and, Missouri RSA 19 – Stoddard.

99 *See* letter from Brent H. Weingardt, PCIA, to Magalie Roman Salas, FCC, dated Aug. 25, 1999; Attachment (Telecompetition, Market Data Report, Aug. 23, 1999) (in 188 of the top 203 markets the two cellular carriers combined have 70 percent or more of total CMRS subscribers). *See also* PCIA Reply Comments at 2-3; Telecompetition at 19-24.

the deployment of new broadband PCS licenses as of 1996, the *CMRS Spectrum Cap Report and Order* appropriately addressed the long-term objectives of fostering competition, since most mobile phone users at that point had only two service providers from which to choose. Even today, the state of competitive development in CMRS markets requires that we remain focused on the longer term in pursuing our competition objectives.

30. Finally, when evaluating the spectrum cap and cellular cross-interest rules, we must consider the potential risk of re-concentration in CMRS markets. We are particularly concerned about the possibility of coordinated behavior among CMRS carriers. The economic literature offers some guidance in assessing the likelihood of coordinated interaction among competitors. For example, one author, Reinhard Selten, employs game theory and a simple model of cooperative behavior to explore the boundary between too few and many competitors.[79] Under his assumptions, he finds that the probability of cartel behavior is 100 percent for up to four competitors. If there are five competitors, the likelihood of a cartel falls to 22 percent. For six or more competitors, the probability declines further to about 1 percent or less. Without endorsing it as being fully applicable to CMRS, we note that Selten's study points up the risks to competition were we to change our policy to permit a reduction in the number of carriers in any particular market.

b. Discussion

31. *Market Entry*. Applying the above criteria, we conclude that our spectrum cap and cellular cross-interest rules continue to be necessary to ensure long-term competition within the CMRS sector. First, with respect to market entry, "entry is . . . easy if entry would be timely, likely, and sufficient in its magnitude, character and scope to deter or counteract the competitive effects of concern."[80] In particular, we note that antitrust authorities "will consider timely only those committed entry alternatives that can be achieved within two years from initial planning to significant market impact."[81] Because a license for use of government spectrum is required to provide CMRS, we must conclude that entry into CMRS markets is not "easy."
Markets function optimally only if one or more firms are able to enter a market or expand current production swiftly and effectively in response to the elevation of prices (or degradation of

found "useful" measures of market concentration, notwithstanding the absence of data on the actual performance of broadband PCS carriers, which were then "under construction in almost all markets." *Id.* at ¶ 96. Thus, we calculated market concentration based on allocated spectrum, rather than on any then current measures of productive ability. *Id.*

79 Reinhard Selten, "A Simple Model of Imperfect Competition, where 4 Are Few and 6 Are Many," International Journal of Game Theory (1973), at 141-201, cited by America One Communications in *ex parte*. *See* attachment to letter from Henry Goldberg, counsel for America One, to Magalie Roman Salas, FCC, in CC Docket No. 94-54, dated August 5, 1999.

80 *Merger Guidelines* at § 3.0.

81 *Id.* at § 3.2.

routinely switch carriers, and that this behavior constitutes evidence of vibrant competition.[108] However, the critical issue is whether these and other indicia of increased competition would be threatened by a reconsolidation of the industry. We agree with those commenters who contend that eliminating the spectrum cap at this time could pose such a threat, by enabling reconsolidation to occur.

41. Finally, while we agree with commenters who argue that the use of historical or contemporaneous data on market performance potentially understates the potential competitive impact of new entrants in a dynamic industry and overstates the risks of anticompetitive conduct,[109] we remain concerned about the effects of possible consolidation of CMRS spectrum over the next two years. We are concerned that if we abandon our ownership rules at this time, the competitive success we have seen in these markets may be reversed.

42. *Reconsolidation.* Given the current levels of market concentration discussed above,[110] we are particularly concerned that any reconsolidation in the CMRS markets would either "potentially raise significant competitive concerns" or "create or enhance market power or facilitate its exercise."[111] In mature industries, the typical indicia of market power being exercised would be curtailed usage, increased prices, or degraded service. Because of the dynamic nature of CMRS markets, however, we think it more likely that any exercise of market power would be evidenced by a slowing in the rate of growth of new customers and usage, prices falling less rapidly than would otherwise occur, or delays in the introduction of newer services.[112]

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comments at i.

[108] AirTouch comments at i, 7; TRA comments at 7; Western Wireless reply comments at 10-11.

[109] *See* Bell Atlantic comments at 17; AirTouch comments at 7; Western Wireless reply comments at 10-11.

[110] *See supra* ¶¶ 35-38.

[111] *Merger Guidelines* at §§ 1.51, 2.0. The guidelines describe these concerns with respect to acquisitions that increase post-merger HHIs increasing by at least 50 or 100 points, respectively.

[112] Competition in a particular market may be diminished through either the unilateral actions of one firm or coordinated interaction among a number of service providers. The fact that we conclude that no single CMRS carrier will likely be able to foreclose competition entirely does not alleviate our concerns about market concentration. We also recognize risks associated with unilateral exercise of market power in the provision of CMRS services by a single market participant. As firms acquire additional financial interests in other operators competing within a given market, their incentives will shift. We also believe that the risks to competition in CMRS markets may stem from the possibility of tacit or explicit collusion among market participants. In either case, we are concerned that excessive concentration of the market might slow or halt the decline in prices, the increase in output, and the introduction of new services for consumers. Further, we are not persuaded by commenters' arguments that the Commission can forestall any adverse competitive impacts from spectrum concentration simply by making additional spectrum available. *See* Bell Atlantic comments at 2, 11, 32 (citing Crandall/Gertner at ¶ 39); Crandall & Gertner reply at 2-3; Bell Atlantic reply comments at 5; BellSouth comments at 10. While we are fully committed to making additional spectrum available, any resulting new market entry is unlikely to be sufficiently timely or sufficiently certain to discipline markets adequately in the near term.

43. In this regard, we reject the view of commenters who suggest that consolidation of CMRS markets to as few as three competitors would not adversely affect CMRS competition. Economic consultants for Bell Atlantic contend that their analyses of cellular pricing data show that entry by a third competitor in each market prompted large price declines, but that subsequent entry by fourth and fifth carriers resulted in little or no appreciable further decline in prices.[113] However, a study conducted by the Yankee Group, and submitted by PCIA, shows that the bundled price per minute for cellular service declined appreciably with the launch of the first PCS carrier in a market, and also declined significantly further when the second and third PCS carriers entered the market.[114] In New York, for example, the study found that the average bundled price per minute dropped 18 percent after the first PCS carrier entered the market, and fell a further 30 percent after the second PCS carrier began providing service.[115]

44. We believe that significant benefits of competition are unlikely to be exhausted with the entry of a third carrier. First, the value of additional entry by fourth and fifth competitors need not be manifested solely through falling prices. The benefits of further entry may appear in the form of improved quality, product innovation, and product differentiation. DOJ has itself recognized the differentiated nature of wireless offerings by mobile voice operators.[116] For example, entry by Nextel introduces a market to the benefits of group conferencing capability. Second, economic theory generally supports the view that additional entry, and the installation of additional capacity, will afford consumers additional benefits, whether through pricing or otherwise. We are persuaded, and PCIA appears to agree,[117] that if mobile voice markets were to stabilize as three-firm oligopolies, recently observed price competition could be reduced or eliminated. Finally, we also draw upon our experience in other telecommunications markets, where consumers generally have benefited from their ability to choose from among more than three firms to obtain the services they desire.[118]

45. We are also not persuaded that, as one commenter argues, the existence of nationwide service and pricing plans "substantially eliminates any concern that carriers would amass spectrum in an effort to extract monopoly rents."[119] While nationwide plans are becoming

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[113] Crandall & Gertner at 8-10. Crandall & Gertner also present data showing declining prices in the same markets where Hayes shows no change in HHIs. Crandall & Gertner reply at 7 ¶ 12, Table 1.

[114] *See* letter from Brent H. Weingardt, PCIA, to Magalie Roman Salas, FCC, dated Sep. 3, 1999, Attachment (Yankee Group, The Impact of PCS Service on U.S. Wireless Pricing, Aug 18, 1999) at 6.

[115] *Id.* at 14.

[116] Competitive Impact Statement, *United States v. AT&T Corporation and Tele-Communications, Inc.*, at 6-7 (filed Dec. 30, 1998).

[117] PCIA reply comments at 14.

[118] To cite just one example, we note the competition in the market for domestic interexchange (long distance) services.

[119] Sidak & Teece at ¶ 20.

an important element in the marketplace, carriers still conduct local marketing strategies that govern the terms on which most consumers obtain service. CMRS carriers retain the ability to conduct promotions on a localized level, and they do so regularly. Particularly in their negotiations with business customers, pricing can be tailored to local market conditions. The fact, therefore, that a major service provider may offer nationwide service and pricing plans does not, in our view, mean that we should be unconcerned about its level of spectrum accumulation in a particular market. To the contrary, we conclude that the control of excessive spectrum by any single market participant would be a matter of serious concern.

46. At this time, we also reject arguments by commenters for a more broadly defined product market.[120] Consumers obtain mobile phone services principally from cellular, PCS and digital SMR carriers.[121] While consumers may be considering other services as alternatives, no evidence was provided suggesting that these alternatives are capable of constraining competitive behavior in this product market. In connection with various merger reviews, the Commission has previously defined interconnected mobile voice telephone services as a separate product market.[122] In general, commenters appear to share the Commission's view that our focus on competitive conditions in the market for mobile voice telephone services is appropriate. Most commenters focused their discussion on conditions in the market for this service. Several expressly affirmed a view that mobile telephone service constitutes a relevant product market.[123] We also take notice that, within the last year, DOJ has examined competitive conditions in mobile telephone markets in connection with their reviews of three large telecom mergers: AT&T-TCI, SBC-Ameritech, and BA-GTE. In each case, DOJ determined that mobile telephone services constituted a relevant product market. In AT&T-TCI, DOJ found that cellular, PCS, and digital SMR firms compete against each other for business in these markets.[124]

47. We share those commenters' optimism regarding the industry's innovative capabilities, and of its expectations of service convergence. Firms are undoubtedly expanding

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[120] CTIA comments at 16-17; Radiofone comments at 4; SBCW comments at 5; Economists, Inc. at 6.

[121] In rural areas, some interconnected service is also available from analog SMR operators. *Fourth Annual CMRS Competition Report* at 34.

[122] Craig O. McCaw and American Telephone and Telegraph Company, Application For Consent to the Transfer of Control of McCaw Cellular Communications, Inc. and its Subsidiaries, *Memorandum Opinion and Order,* 9 FCC Rcd 5836 (1994) (*McCaw*), *reconsideration denied on other grounds, Memorandum Opinion and Order on Reconsideration,* 10 FCC Rcd 11786 (1995), *aff'd sub nom. SBC Comm., Inc. v. FCC,* 56 F.3d 1484 (D.C. Cir. 1995). In the AT&T/McCaw merger, the Commission defined relevant product and geographic markets as "interexchange services in U.S., local cellular service in each MSA or RSA, and the manufacture of cellular network equipment in North America." *McCaw,* 9 FCC Rcd 5836, 5843-44 & n.25.

[123] Sprint PCS declares that "for purposes of the spectrum cap, the relevant market is the mobile telephony market, not the local telecommunications market generally." Sprint PCS comments at 6 n. 17.

[124] Competitive Impact Statement, *United States of America versus AT&T Corp. and Tele-Communications, Inc.* at 5-6. While some commenters argued for a more broadly defined product market, they provided no evidence of the nature required to adequately support alternative market definitions.

the range of services that they offer. However, in the case of mobile voice telephone service, for example, no commenter furnished evidence that consumers perceive any particular alternative communication service as sufficiently interchangeable, such that it could impede a hypothetical monopolist of mobile voice services from profitably elevating prices—the standard test for defining a market. In particular, no evidence was submitted that consumers are switching between mobile voice telephone services and other services in response to changes in relative prices.[125]

48. In summary, we are concerned about the possibility that increased aggregation of spectrum, and the resulting consolidation among CMRS providers, could have adverse effects on competition. Generally, diminished competition tends to result in higher prices, reduced product quality, and less innovation. In the CMRS markets, we have seen substantial progress in competitive conditions as the result of the recent influx of new entrants. Our concern in this proceeding is that if these markets begin to re-consolidate this excellent progress may slow or cease altogether. We also recognize the potential for concentrated markets to facilitate the exercise of anticompetitive or collusive behavior by market participants. Competition, while growing steadily, is still developing as new licensees enter these markets. Ultimately, we do not want to place in jeopardy the substantial benefits of greater competition in CMRS markets just as they are beginning to be realized. At the present stage of development of CMRS markets, we find that these risks pose a significant threat to our goals of promoting and protecting competition in CMRS markets.[126]

4. Benefits of Bright-Line Rules Over Alternative Regulatory Tools

49. We also conclude that the benefits of the bright-line spectrum cap and cellular cross-interest rules in addressing concerns about increased spectrum aggregation continue to make these approaches preferable to exclusive reliance on case-by-case review under section 310(d).

a. Benefits of Regulatory Certainty and Regulatory Efficiency

50. We believe that the spectrum cap and cross-ownership rules are efficient means to promote and protect competition in CMRS markets, particularly in view of the competitive concerns discussed above. By setting bright lines for permissible ownership interests, the rules

125 We recognize that some new services, such as two-way messaging, may provide sufficient functionality to compete effectively in this market. However, we received no evidence that the market for this service would be large enough to constrain a monopoly provider of mobile voice services from profitably elevating prices. Other services, such as satellite-based mobile voice telephone services, are at this time far too expensive in terms of airtime and equipment prices to deter anticompetitive pricing by mass-market mobile voice service providers.

126 We note that CTIA recognizes that the risk of anticompetitive or collusive behavior grows as market concentration increases. CTIA comments at 7.

benefit the public, the telecommunications industry, and the Commission by providing regulatory certainty and facilitating more rapid processing of transactions.[127]

51. Providing regulatory certainty is particularly important in an environment in which there is likely to be widespread restructuring of CMRS spectrum holdings, for example, in apparent efforts to create national footprints or as the by-product of larger mergers within the telecommunications industry. We also agree with numerous commenters who assert that regulatory certainty is critical to providing the industry with incentives to make investments, including in new technologies such as 3G service.[128] Moreover, we believe that continuing to provide bright-line guidance as to permissible ownership interests will assist CMRS service providers to structure their transactions and plan their investments efficiently, based on their knowledge of the relevant regulatory requirements. This, in turn, will facilitate obtaining financing for such transactions and investments.

52. Our bright-line rules also promote regulatory efficiency, both by speeding the processing of transfers of control and assignment of licenses and by conserving the resources of the Commission and of interested parties. Abandoning our spectrum cap and cross-interest rules inevitably would lengthen our review process. Given the rapid pace of developments in the telecommunications industry, we believe that any advantages that might accrue to market participants from individualized review of spectrum concentration are outweighed by the advantages to them of a shorter review period for their transactions.[129] We note in that regard that any party that believes that an individualized analysis is appropriate in its case may request a waiver of our spectrum cap and cross-interest rules.

53. Additionally, we agree with the concerns raised by several commenters as to the burdens on the resources of the Commission and of interested parties that are inherent in case-by-case determinations regarding permissible ownership structures.[130] The SBA, for example, suggests that case-by-case analysis is especially expensive and time-consuming for small businesses, who often do not have the requisite resources.[131] Similarly, PCIA urges that newer entrants do not have the resources of larger incumbents to fight protracted legal battles, which it contends are particularly characteristic of antitrust reviews.[132]

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[127] The D.C. Circuit also has recognized that a spectrum cap may be most effectively administered through a bright line rule. *BellSouth v. FCC*, 162 F.3d at 1225.

[128] BellSouth comments at 15, 19; BellSouth reply comments at 13; *see also* Chase comments at n.2; PCIA comments at 18; CTIA reply comments at 15; Omnipoint comments at 6; SBCW comments at 3; TDS reply comments at 2, 7, 9; Sprint PCS comments at 2.

[129] Thus we are not persuaded by CITA's argument that a case-by-case approach is more efficient and effective than reliance on a spectrum cap rule. *See* CTIA reply comments at 13.

[130] *See* Wireless One comments at 5; Sprint PCS comments at 2.

[131] SBA reply comments at 6.

[132] PCIA comments at 16.

b. Benefits of Preventing Spectrum Re-Concentration When Section 310(d) Review is Not Available

54. We further conclude that the spectrum cap serves important public interest goals that are not covered by section 310(d). The Commission does not have the opportunity to review under section 310(d) certain kinds of transactions that may result in re-concentration of spectrum. For example, our review authority under section 310(d) would not extend to a transaction in which less-than-controlling interest in a licensee was transferred, even if the holder of one cellular license in a particular service area obtained a substantial interest in the other cellular block in that market. Such a transaction nonetheless could give rise to competitive concerns, for the reasons that we discuss below.[133] Because certain types of transactions that may re-concentrate spectrum and reduce incentives to compete would not be reviewable under section 310(d), we disagree with commenters who suggest that section 310(d) is, by itself, an adequate substitute for our spectrum cap and cross-interest rules.[134]

c. Benefits for Ongoing Spectrum Management

55. We also conclude that bright-line rules are useful for the Commission's ongoing spectrum management purposes. For example, bright-line rules greatly expedite the assignment of spectrum using auctions. They are considerably less costly from a public interest perspective than attempting to decide on a case-by-case basis whether a particular bidder's acquisition of a certain amount of spectrum in a service area would result in undue spectrum concentration. Making that decision with respect to each bidder for a particular service area before the start of an auction would significantly and unnecessarily delay auctions. Even making the decision only with respect to auction winners could delay substantially the assignment of licenses and, if undue concentration were found, presumably would require an entire re-auction. Accordingly, we do not believe that it would be efficient to allow auction bidders to acquire spectrum in excess of the limits imposed by our rules, leaving resulting competitive concerns to be resolved by the Commission on an individual basis at some point in the bidding or licensing process.

d. Benefits Not Afforded By Antitrust Review

56. The availability on a case-by-case basis of antitrust review, which several commenters raise,[135] does not change our conclusions as to the benefits of our spectrum cap and

[133] *See* ¶¶ 90-98 *infra*. *See also CMRS Spectrum Cap Report and Order*, 11 FCC Rcd 7882 ¶ 121.

[134] *See* AirTouch comments at 14-15; BellSouth comments at 14; CTIA comments at 22; GTE comments at 29-32; Radiofone comments at 5; SBCW comments at 8.

[135] AirTouch comments at 14; Bell Atlantic Mobile comments at 14; Bell Atlantic Mobile reply comments at 9; Crandall & Gertner Reply at 3 ¶ 4; BellSouth comments at 14; CTIA comments at 3, 22-23; SBCW comments at 8. Several commenters also identified opportunities to seek private remedies. Bell Atlantic Mobile comments at 2, 14; Bell Atlantic Mobile reply comments at 9; GTE comments at 27, 31.

cross-interest rules. We already have discussed the advantages in general of our bright-line rules over a case-by-case approach.[136] Additionally, we note that we typically have conducted a competitive analysis as part of our public interest analysis under section 310(d), notwithstanding any independent antitrust review. The courts have acknowledged our authority to engage in such an analysis.[137] We do not disagree with commenters that the availability of case-by-case antitrust review constitutes a valuable tool in furthering our competitive goals. We believe, however, that it is important for us to retain our ability to employ more than one regulatory tool, where necessary in the public interest, to protect and promote competition in those areas within our particular expertise, including spectrum mangement.[138]

57. Moreover, for reasons related to resource constraints or procedural priorities, other agencies with antitrust authority may choose not to give detailed review to a particular merger that, from this Commission's perspective, may adversely affect competition in CMRS markets, or may otherwise be contrary to the public interest.[139] Our spectrum cap and cross-interest rules were designed specifically for use in these markets. The spectrum cap rule, in particular, was expressly conceived to achieve long-term objectives that stressed the beneficial role of new entrants. By contrast, antitrust laws were written primarily to address concerns involving mergers that threaten to curtail actual competition.[140] Accordingly, we do not believe

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[136] *Supra* at ¶¶ 50-53.

[137] *See, e.g., SBC Communications Inc. v. FCC*, 56 F.3d 1484, 1490-91 (D.C. Cir. 1995) (*SBC*); *see also United States v. FCC*, 652 F.2d 72, 81-82 (1980) ("competitive considerations are an important element of the 'public interest' standard") (citations and interior quotation marks omitted). Numerous commenters also pointed to the Commission's ability to conduct competitive reviews under its public interest authority. AirTouch comments at 14-15; BellSouth comments at 14; CTIA comments at 22; GTE at 29-32; Radiofone comments at 5; SBCW comments at 8.

[138] We do not accept the proposition that all transfers resulting in consolidation of spectrum below the spectrum aggregation limit should be exempt from section 310(d) review. We can envision circumstances under which a transfer could raise competitive concerns notwithstanding compliance with the spectrum cap. Accordingly, we reject proposals to adopt a processing threshold in lieu of our spectrum cap rule, whereby, for example, only transactions taking a firm's spectrum interests above a specified level would be subject to public interest review or where different standards of review would apply to different levels of concentration. *See, e.g,* AT&T comments at 13-14; BellSouth comments at 15. We note, however, as has been our practice in the past, if a licensee would continue to be in compliance with the spectrum cap after a proposed assignment or transfer of control, in reviewing the application we would generally presume that it does not cause an undue risk on market concentration unless specific evidence to the contrary is presented by either interested parties or through review by Commission staff.

[139] We also note that there may be a small class of transactions that would be covered by our spectrum cap and cross-interest rules but that would not meet the threshold requirements of the Hart-Scott-Rodino Act, 15 U.S.C. § 18a, and thus would not receive routine antitrust review.

[140] Herbert Hovenkamp, Federal Antitrust Policy (1994), § 13.4, at 512. *See also* Applications of NYNEX Corporation and Bell Atlantic Corporation, *Order*, 12 FCC Rcd 19985, 20023 ¶ 67 (1997). Although the Supreme Court has theorized that two kinds of potential competition may be within the reach of section 7 of the Clayton Act, no court has yet decided whether section 7 authorizes a claim that a merger is illegal because it eliminated actual potential competition. *See U.S. v. Marine Bancorp.*, 418 U.S. 602 (1974); *see also, e.g., Tenneco, Inc. v. FTC*, 689 F.2d 346, 352-55 (2d Cir. 1982); *Mercantile Texas Corp. v. Board of Governors*, 638 F.2d 125, 1265 (5th

that the antitrust laws should be the exclusive tool for addressing competition issues of the nature we confront in CMRS markets.[141]

e. Benefits Not Afforded by Regulation of Market Behavior

58. Finally, we note that several commenters identified alternative regulatory tools that the Commission has at its disposal, in addition to its public interest authority under section 310(d). These include: (a) the Commission's build-out requirements, which, it is suggested, serve to thwart attempts to warehouse spectrum;[142] (b) resale obligations, as a means for preserving service options in areas where spectrum aggregation results in fewer facilities-based competitors;[143] (c) sections 201 and 202, to ensure just, reasonable, and nondiscriminatory practices on the part of CMRS carriers;[144] and (d) the Commission's complaint and enforcement procedures under section 208 of the Act.[145] We agree with these commenters to the extent that we recognize the importance of retaining our flexibility to employ a variety of regulatory tools where particular circumstances may make alternative approaches useful. We are not persuaded, however, that the alternatives suggested by commenters, individually or collectively, constitute an adequate substitute for our spectrum cap and cross-interest rules as efficient means for promoting and protecting competition in the CMRS sector. Indeed, the greater competition that the spectrum cap promotes makes reliance on those other, arguably more intrusive, regulatory tools, which focus principally on controlling licensees' market behavior, less necessary and less frequent. As a general matter, we believe the better approach is to have rules that promote competition and let competition regulate market behavior, rather than rely in the first instance on this Commission to directly regulate such behavior even if we have the legal authority to do so.

5. Public Interest Costs

59. Background. In the *NPRM*, the Commission emphasized that our regulation must promote, rather than impede, the introduction of innovative services and technological advances.[146] We invited comment on whether the spectrum cap rule has promoted the ability of

Cir Unit A 1981); *FTC v. Atlantic Richfield*, 549 F.2d 289, 293-94 (4th Cir. 1977).

141 *See SBC*, 56 F.3d at 1490 (upholding Commission's approval of a merger based both upon antitrust principles and upon considerations "beyond the scope of antitrust law" including "the development of the telecommunications industry, technical innovation, . . . [and] investment in infrastructure").

142 Bell Atlantic reply comments at 3 ¶ 4; Western Wireless reply comments at 12.

143 America One comments at 4.

144 CTIA comments at 4-5.

145 AirTouch comments at 15; BellSouth comments at 14; Western Wireless reply comments at 16.

146 *NPRM*, 13 FCC at 25135 ¶ 5.

wireless providers to enter into and compete in markets other than mobile voice service.[147] Additionally, we asked whether the spectrum cap rule serves as a barrier to firms that wish to offer additional services.[148] We also asked whether relaxation of the cap might "allow efficient deployment of third-generation wireless services that would be prevented under the present cap."[149] In addition, in the *NPRM*, we noted that a significant public interest factor in our decisionmaking on CMRS spectrum aggregation is the prospect for CMRS providers to compete against incumbent local exchange carriers (LECs), and invited comment on whether relaxing the spectrum cap rule would promote wireless competition in local exchange markets.[150] Finally, the *NPRM* invited comment on whether efficiency benefits would flow from changes in the rule that might counterbalance concerns regarding possible anticompetitive effects resulting from increased geographic concentration of ownership.[151]

60. Discussion. Some parties argue that there are potential public interest costs associated with the use of the spectrum cap and cellular cross-ownership rules and that such costs warrant the elimination of those rules. We conclude, however, that we can address adequately the concerns raised by these parties by resetting the parameters of the cross-interest and the spectrum cap rules in certain markets, through future spectrum allocations, and by other means.

61. *New and Innovative Services*. Some parties claim that the current cap impairs the ability of wireless carriers to use existing spectrum to develop 3G and other advanced services, such as high-speed internet access.[152] While these possibilities are a concern to us, we do not believe these claims provide a basis for lifting the spectrum cap at the present time. Initially, we note that the assertions in the record along these lines are very general and do not provide any concrete evidence regarding the amount of spectrum that will be needed for 3G technologies or exactly when carriers will need access to that spectrum.[153] Our analysis shows that there are very few markets in which carriers have spectrum holdings that are approaching the cap, which suggests the cap is in most cases not a binding constraint, at least not at the present time. Moreover, as parties explain, there are numerous alternatives to CMRS spectrum that can be used to provide certain types of new services.[154] For example, Local Multipoint Distribution Service (LMDS), Digital Electronic Message Service (DEMS), 39 GHz, and Multichannel Lultipoint

[147] *Id.* at 25155 ¶ 47.

[148] *Id.* at ¶ 48.

[149] *Id.* at 25153-54 ¶ 43.

[150] *See NPRM* at 25152-53 ¶ 43, 25154-55 ¶¶ 47-48.

[151] *Id.* at 25152-53 ¶ 43.

[152] GTE comments at 20; GTE reply comments at 16-19; CTIA comments at 3; SBCW comments at 4, 11; Omnipoint comments at 4; RTG comments at 9; Western Wireless comments at 9 n 16.

[153] *See, e.g*, Crandall & Gertner Decl. at 21 ¶ 62.

[154] PCIA reply comments at 15 n 39.

Distribution Service (MMDS) are suitable for delivering fixed access services. We also note that no party has submitted an application for waiver to enable it to use additional spectrum to implement a business plan for the development of 3G services.[155]

62. In addition, in our view any disincentives toward the development of new services that arguably may be caused by the current spectrum cap must be weighed against the disincentives toward the development of new services that would exist in a regulatory world without the current spectrum cap. As the Commission recognized in the *CMRS Spectrum Cap Report and Order*, "[a]t some point, however, horizontal concentration starts to work against those goals [of efficiencies and economies] because it results in fewer competitors, less innovation and experimentation, higher prices and lower quality, and these disadvantages outweigh any advantages in terms of economies and efficiency."[156] Also, we believe that in many ways the spectrum cap rule has in fact encouraged innovations, such as the development of multi-modal handsets, the creation of partnerships resulting in better roaming packages, and the upgrading of networks and service offerings with the conversion to digital systems.

63. Finally, we expect to make available in the near future additional spectrum for the provision of 3G and other advanced wireless services.[157] We will be initiating proceedings to allocate spectrum for those services. We believe it is more appropriate to address spectrum requirements for 3G and other advanced services in the context of a spectrum allocation proceeding than in this proceeding. In the allocation proceeding we will consider whether any newly allocated spectrum should be included in the cap. If we decide to include the newly allocated spectrum under the cap, we will determine in that proceeding how the cap should be adjusted to reflect that additional spectrum.

64. *Competition with Wireline Services*. We find that the record does not indicate the need to raise the spectrum cap to realize the potential of wireless service as a source of competition to wireline service. Although some parties argue that the spectrum cap deters investment in technologies that may compete with wireline offerings,[158] we find that at least theorectically, it is equally plausible that the spectrum cap encourages that development of

[155] To the extent that a licensee can demonstrate that compliance with the spectrum cap limits its ability to implement 3G or other advanced services in a particular geographic area in an timely and efficient manner, we would consider grant of a waiver of the spectrum cap for that carrier in that geographic area.

[156] *CMRS Spectrum Cap Report and Order*, 11 FCC Rcd at 7869 ¶ 95.

[157] *See* Commission Staff Seek Comment on Spectrum Issues Related to Third Generation Wireless/IMT-2000, *Public Notice*, DA 98-1703 (rel. Aug. 26, 1998). We also note that there is potentially more spectrum available for CMRS in addition to the planned 3G allocation. For example, in the *Channel 60-69 (Commercial) NPRM* the Commission sought comment on whether to allow mobile, as well as fixed, services in those bands. Service Rules for the 746-764 and 776-794 MHz bands, and Revision to Part 27 of the Commission's Rules, WT Docket 99-168, *Notice of Proposed Rulemaking*, FCC 99-97 (rel. June 3, 1999). That and other pending or contemplated proceedings may furnish additional sources of spectrum for 3G.

[158] BellSouth comments at 8; Bell Atlantic comments at 33-34.

wireless services that can compete with wireline services. By guarding against the concentration of ownership in a market, the spectrum cap rule helps to ensure that a significant number of wireless licensees will compete in that market. We believe, as noted by TRA, that the likelihood of at least one licensee focusing on wireless local loop service increases with the number of wireless licensees.[159] Moreover, we note that without more CMRS carriers in each market, one of the few carriers with the ability to challenge the incumbent LEC would likely be the incumbent LEC's wireless arm, which also has the least incentive to compete.[160] Finally, we observe that, for purposes of providing services that can substitute for local wireline service (*e.g.*, fixed wireless services), there are numerous alternatives to the use of CMRS spectrum.[161]

65. *Additional Efficiencies*. We find that there is no showing in the record that raising the cap would allow the realization of significant additional efficiencies. First, we note that the record indicates that few carriers have accumulated as much as 45 MHz of spectrum in any one market and that, in general, carriers with 45 MHz are not currently using their entire spectrum allocation.[162] Second, we find that raising the spectrum cap would not necessarily result in significant improvement in allocation of resources because digitalization and other capacity-enhancing innovations have permitted more efficient allocation by carriers of existing spectrum under the cap.[163]

B. Modifications to the Cellular Cross-Interest and Spectrum Cap Rules

66. As we have just discussed, the spectrum cap and cellular cross-interest rules continue to be necessary to promote and protect competition in CMRS markets at this time. After careful analysis and extensive review of the rules and the record in this proceeding, however, we believe that the rules can be relaxed to allow some additional cross-ownership interests without significantly increasing the risk of undue market concentration or anticompetitive behavior by licensees. Specifically, we amend the cellular cross-interest rule to allow greater cross-ownership between cellular carriers in overlapping CGSAs. We amend the spectrum cap to allow a licensee to have an attributable interest in up to 55 MHz in rural areas, and adopt a separate equity benchmark of 40 percent for holdings by passive institutional investors

1. Modifications to Cellular Cross-Interest Rule

67. Background. The cellular cross-interest rule is set out in section 22.942 of the Commission's rules and places limits on any person having certain direct or indirect ownership

[159] TRA comments at 10.

[160] *See* MCI comments at 4; *see also* TRA comments at 9.

[161] PCIA reply comments at 15 n 39.

[162] *See* Sprint PCS comments at 5; *see also* GTE reply comments at 19.

[163] *See, e.g.*, Sprint PCS comments at 13.

interest in licenses for both cellular channel blocks in overlapping cellular geographic service areas (CGSAs).[164] A party with a controlling interest in a license for one cellular channel block may not have any direct or indirect ownership interest in the license for the other channel block in the same geographic area. A party may, however, have a direct or indirect ownership interest of five percent or less in the licenses for both channel blocks so long as neither is a controlling interest.[165] Divestiture of interests as a result of an assignment of authorization or transfer of control must occur prior to the consummation of the transfer or assignment.[166]

68. In the *NPRM*, we sought comment on whether we should retain, modify, or repeal the cellular cross-interest rule given the changes in mobile voice markets, and the fact that many markets no longer consist primarily of cellular duopolies, as they did in 1991 when the rule was first adopted.[167] More specifically, we sought comment on whether the CMRS spectrum cap rule provides sufficient protection from anticompetitive behavior by cellular licensees in the same market and whether we should eliminate the cellular cross-ownership rule if we decide to eliminate or raise the CMRS spectrum cap.[168] Because there are some markets in which no PCS provider has initiated service yet, we also sought comment on whether to apply the cellular cross-interest rules only in some, but not all, markets, and, if so, what would be an appropriate threshold for determining in which markets the rule would not apply.[169] We also sought comment on whether we should relax the current attribution rules related to this rule.[170]

69. RTG and Western Wireless assert that the competitive advantages enjoyed by cellular providers that led to the adoption of the cellular cross-interest rule are being eroded by the addition of new service providers and increased competition in CMRS markets, and thus the rule is no longer necessary.[171] GTE and TDS, however, argue that since there are still many cellular markets, particularly in rural areas, in which broadband PCS or digital SMR service has not been introduced, the rule should be retained, at least for an interim period.[172] TRA and Wireless One support retention of the rule, arguing that the cellular cross-ownership rule promotes facilities-based competition and that competition would be seriously limited if the cellular carriers were allowed to join forces.[173] SBCW, on the other hand, cites to concerns of

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164 47 C.F.R. § 22.942.

165 47 C.F.R. § 22.942(a).

166 47 C.F.R. § 22.942(b).

167 *NPRM*, 13 FCC Rcd at 25167 ¶ 81.

168 *Id.* ¶ 82.

169 *Id.* ¶ 83.

170 *Id.* at 25167-68 ¶ 84.

171 RTG comments at 13; Western Wireless comments at 16.

172 GTE comments at 30; TDS comments at 6; GTE reply comments at 24-25.

173 TRA comments at 13; Wireless One comments at 7.

parity between CMRS services as justification for elimination of the cellular cross-ownership rule since there is no similar restriction on broadband PCS or SMR licensees.[174] Although TDS supports the retention of the rule, it argues that the attribution rules should be relaxed to match those used for the spectrum cap.[175]

70. Discussion. We conclude that the cellular cross-interest rule is still necessary at this time, given the strong market position held by the two cellular carriers in virtually all markets. The two cellular carriers still have the vast majority of subscribers in all markets and are still the only providers of mobile telephone service in many markets. We recognize, however, that the cellular carriers' relative market position has diminished and continues to do so as PCS and digital SMR service providers initiate service in more areas of the country and attract more subscribers. We therefore will reassess the need for a separate cellular cross-interest rule as part of our year 2000 biennial review, by which time we expect that the market positions of the two cellular carriers and PCS and digital SMR service providers will have narrowed further. In the meantime, we believe it is appropriate now to relax the attribution benchmarks used with the cellular cross-interest rule.

71. Although the structure of mobile voice markets has changed since the Commission adopted the cellular cross-interest rule in 1991, and the market shares for the two cellular carriers are eroding with the introduction of competition by PCS and digital SMR, the two cellular carriers are still the predominant players in each market. As the Commission recently reported, "[w]hile non-cellular mobile telephone operators have made significant inroads into the mobile telephone sector, they are still a relatively small portion of the whole sector."[176] For example, we found that at the end of 1998, cellular operators had approximately 86 percent of the mobile telephone subscribers nationwide, while broadband PCS had about ten percent and digital SMR had just over four percent.[177] As the market data submitted by PCIA demonstrates, there are still many markets where broadband PCS is not yet being offered.[178] According to these data, even in the market where PCS has been most successful, PCS carriers have only about 30 percent of the subscribers.[179] Further, the Commission has found that there is a consensus of analysts that while the cellular carriers' subscribership share will continue to decline, it will likely still be near 70 percent in 2002.[180]

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174 SBCW comments at 14.

175 TDS comments at 6-7.

176 *Fourth Annual CMRS Competition Report* at 9.

177 *Fourth Annual CMRS Competition Report* at 9 (citing Dennis Leibowitz, et al., The Wireless Communications Industry, Donaldson Luftkin & Jenrette, Winter 1998/1999 at 18).

178 PCIA reply comments, Attachment A. *See also Fourth Annual CMRS Competition Report* at (B-16)-(B-20).

179 *See* letter from Brent H. Weingardt, PCIA, to Magalie Roman Salas, FCC, dated Aug. 25, 1999, Attachment (in only 4 of the top 203 markets do the PCS carriers have a combined market share in excess of 30 percent). *See also PCIA* reply comments, Attachment A at 24.

180 Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and

72. Based on our review of the data on the market shares of the cellular carriers, we find that it is necessary to retain the cellular cross-interest rule at this time. Although the cellular carriers do not have the same market power that they did when the rule was adopted, we believe that most cross-ownership situations between the two cellular carriers would pose a substantial threat to competition in CMRS markets. We therefore believe that it is premature to remove the cellular cross-interest rule.

73. We also find that it is necessary to maintain a separate cellular cross-interest rule, and not rely solely upon the spectrum cap. The spectrum cap prohibits the two cellular licensees from having an attributable interest in each other because that would exceed the 45 MHz limitation. Reliance on the cap without the cellular cross-interest rule would allow a party to have an attributable interest in one of the cellular licensees, including control, and up to 20 percent equity ownership interest in the other cellular licensee in the same market. We find that such a high ownership interest by one cellular licensee in the other cellular licensee would pose a substantial threat to competition. It is also not appropriate for us to rely solely on the spectrum cap because we have today modified the spectrum cap to allow a licensee to have an attributable interest in up to 55 MHz in rural areas, defined as RSAs.[181] Without a separate cross-interest rule, this new provision of the spectrum cap would allow a licensee to control both cellular licenses in an RSA. As we discuss below, the purposes of increasing the spectrum aggregation limit in rural areas are to allow licensees in those areas access to additional spectrum for enhanced or expanded services, and to partner with other carriers, particularly PCS, to better provide services to rural areas. Allowing the two cellular carriers to merge or have significant ownership interests in each other would not serve those purposes and would likely reduce the limited competition in those markets. We will, however, review the need for this rule as part of our year 2000 biennial review. Given the rapid ongoing changes in CMRS markets, the market position of the cellular carriers may have diminished by then to a point where there will no longer be a need for a separate cross-interest rule for cellular carriers.

74. Finally, although CMRS markets are not yet sufficiently competitive to eliminate the cross-interest rule, we believe that given increased competition it is appropriate to relax the attribution benchmarks used in the rule. Currently a party with a controlling interest in one of the cellular licensees may not have any direct or indirect ownership interest in the other licensee in that CGSA. We amend the rule to allow a party with a controlling or otherwise attributable interest in one of the cellular licensees to have a non-controlling or otherwise non-attributable direct or indirect ownership of up to five percent in the other cellular licensee in the CGSA. We do not believe that such a cross-ownership limit would generally pose a significant threat to competition. We continue to insist that a party with a controlling interest in one cellular licensee

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Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, *Third Report*, FCC 98-91 (rel. June 11, 1998), at B-8.

[181] *See* ¶ 84 *infra*.

in a CGSA may not have a controlling interest, no matter how small, in the other licensee in that market.

75. Similarly, we amend the rule to allow a party to have a non-controlling or otherwise non-attributable direct or indirect ownership interest of up to 20 percent in both licensees in the same CGSA. The current rule allows a party to have up to a five percent non-controlling interest in both licensees. We believe that given the trend towards more competitive markets, we can relax this attribution level and use the general attribution benchmark set out in the spectrum cap.[182] This is a first step towards reliance on the spectrum cap alone when the market position of the cellular carriers makes it appropriate to eliminate the cellular cross-interest rule altogether.

76. We also amend the attribution rules relating to the cellular cross-interest rule to bring them in line with the spectrum cap attribution rules in certain other respects. The spectrum cap attribution rules also apply to interests in the two cellular licensees. For example, the attribution rules of the spectrum cap would prohibit cellular licensees in the same CGSA from having joint officers or directors even though the cross-interest rule does not address that issue.[183] Due to our adoption of a 55 MHz spectrum limitation for RSAs, various attribution requirements set out in the cap would no longer apply to cellular cross-ownership interests in rural areas. Because we believe that allowing those types of interests, such as joint officers or directors or joint operating or marketing arrangements, would cause competitive concerns we amend the rule specifically to prohibit these types of ownership interests.

2. Modifications to Spectrum Cap Rule

a. Overview

77. While we conclude that the spectrum cap should be retained, upon review of the record and re-evaluation of the various components of section 20.6, we further conclude that some modifications of the spectrum cap are warranted. As an initial matter, we find that the cap should not generally be raised above 45 MHz. We conclude, however, that an exception should be made in rural areas, defined as RSAs, where a 55 MHz cap will provide additional benefits to the carriers and consumers without substantial risk of anticompetitive conduct. We also amend the attribution provisions of the rule to establish a separate benchmark of 40 percent for equity interests held by passive institutional investors. Finally, we adopt other changes to the rule to clarify which SMR spectrum comes under the cap and to clarify the divestiture provisions of the rule.

[182] *See* 47 C.F.R. § 20.6(d)(2).

[183] *See* 47 C.F.R. § 20.6(d)(7).

b. Spectrum Aggregation Limit

78. Background. In the *NPRM*, we sought comment on whether, if we retain a spectrum cap, a 45 MHz limitation is appropriate given increased competition in the CMRS marketplace, or, if not, what would be an appropriate spectrum aggregation limitation in light of current and future prospects for competition in CMRS markets.[184] We also sought comment on whether to raise the 45 MHz limitation when competition in relevant markets reaches a particular level, possibly based on the number of competitors that would remain in a market after the transfer or control or assignment.[185] Similarly, we asked for comment on the benefits of allowing licensees serving rural, high-cost areas to hold more than 45 MHz of broadband CMRS spectrum in those areas and how we should define those areas.[186]

79. Most commenters focused on whether to retain or eliminate the spectrum cap entirely and did not specifically address whether to adjust the 45 MHz limit. Omnipoint, however, supports retention of an aggregation limit but suggests raising the limit to 70 MHz.[187] It argues that while elimination of the cap could lead to anticompetitive results, raising the cap to 70 MHz would allow carriers to develop economies of scale and partnering arrangements while still ensuring at least three competitive carriers in each market.[188] RTG, while supporting elimination of the cap, states that at a minimum the cap should be raised to 90 MHz. A 90 MHz cap would allow a carrier to acquire two cellular and one 30 MHz PCS license, a combination, which according to RTG, would allow the provision of advanced voice and data services, including high-speed Internet access and teleconferencing to rural markets.[189] SBA concurs with raising the cap, but recommends an aggregation limit that would ensure at least three or four competitors would exist in every market.[190] Triton states that the cap should be raised to 55 MHz in rural areas, or the overlap standard increased to 50 percent, or both.[191]

80. Discussion. We conclude that the spectrum aggregation limit should remain at 45 MHz in most areas. This limitation strikes an appropriate balance between the benefits of spectrum aggregation, and the risk of undue economic concentration in the CMRS markets.[192] In

[184] *NPRM,* 13 FCC Rcd at 25158 ¶ 55.

[185] *Id.* ¶ 56.

[186] *Id.* at 25158-59 ¶ 57.

[187] Omnipoint comments at 5.

[188] *Id.* at 5-6.

[189] RTG comments at 11.

[190] SBA reply comments at 5.

[191] Triton comments at 6.

[192] As has been our practice in the past, if a licensee would continue to be in compliance with the spectrum cap after a proposed assignment or transfer of control, in reviewing the application we would generally presume that it does not cause an undue risk on market concentration unless specific evidence to the contrary is presented by either